Town of Montville Planning & Zoning Commission
Site Plan or Special Permit Application

SITE

☒ Site Plan — Number 220 - 8 — Plan Date 7/2020
Revision _____

☐ Special Permit — Fee paid 210.00 — Revision _____

CHECK # 857

Assessors Map 062 Lot 015-000
Project Address 161 Leffingwell Road

Name of Applicant Driveway Guys
Address of Applicant 224 Rogers Road, Norwich, CT 06360
Project Name _____
Tel # _____ Cell# 860-705-4454
Fax # _____ Email cme4paving@yahoo.com
Name of Property Owner Patterson Bros Properties LLC
Name of Attorney _____
Tel # _____ Cell# _____
Fax # _____ Email _____
Name of Engineer Green Site Design, LLC - Ellen Bartlett
Tel # 860-892-1380 Cell# _____
Fax # _____ Email ebartlett@greensitedesignllc.com

Zoning District LI — Lot Size 9.4 acres — Total Acres 9.4 acres
☒ Yes ☐ No **Regulated Wetlands** — **Acreage** _____ — **Permit Date** _____
☒ Yes ☐ No Flood Plain — Flood Hazard Area _____
☒ Yes ☐ No A-2 Survey — Name of Surveyor Robert Mullen
Building size _____ s.f. — Building height 15 feet
Number of acres to be disturbed 5.9 acres
Applicable Zoning Regulation(s) _____
Project description Self Storage Facility

This project will use:
☒ Septic system ☐ Municipal sewer
☒ Individual well ☐ Public water supply well ☐ SCWA well ☐ Municipal water

☐ Yes ☒ No This project is located in a **Public Water Supply Watershed**
☐ Yes ☐ No This project has received approval from the Uncas Health District
☐ Yes ☐ No This project has received approval from the appropriate Water Authority

** **Attach Copy of All Approvals**

FILE COPY

RECEIVED
AUG 3 2020
By _____

☒ Yes ☐ No This project requires a State General Stormwater Quality Permit.
Registration # _____

☐ Yes ☒ No This project requires a permit from the Army Corps of Engineers.

☐ Yes ☒ No This project requires a Water Diversion Permit.

☐ Yes ☒ No This project requires a Dam Permit.

☐ Yes ☒ No This property is subject to a Conservation Restriction and/or a Preservation Restriction. If yes, attach a copy of certified notice.

☐ Yes ☒ No Drainage calculations submitted:
Date _____ Rev. date _____ Rev. date _____

☐ Yes ☒ No This project requires a OSTA (Office of State Traffic Commission) Permit.

☐ Yes ☒ No This project requires a DOT Encroachment Permit.

☐ Yes ☒ No The plan has been submitted to the DOT District 2 Office.

Number of parking spaces provided _____

Number of vehicle trips per day generated by this project _____

☐ Yes ☐ No A determination of applicability of of the following Zoning Regulations Sections _____

Signature of Applicant _____ Date 7/15/2020

Signature of Owner _____ Date 7/15/2020

OFFICE USE ONLY

Review	Date Sent	Date Received
Town Engineer		
Uncas Health District		
Fire Marshal		
Building Official		
Mayor		
WPCA		
DOT District 2		
N.L. Water		
Other		

Date of Receipt _____ Date of Public Hearing _____ Date Hearing Closed _____

Date of Extension #1 _____ Date of Extension # 2 _____ Terminal Date _____

STATEMENT OF USE

EXISTING CONDITIONS

The site is approximately 9.4 acres in area and is shown on the Existing Conditions Plan (Sheet 1 of the site plans). The site has frontage on Montville Road and Leffingwell Road and has previously been excavated. There is a wetlands system on the site, associated with Trading Cove Brook, the center of which is the northerly property line of the site. Please see the wetlands report for a more detailed description of the wetlands system on the site. There is no work propose within the 50 foot upland review area.

PROPOSED DEVELOPMENT

The project proposes new free standing self-storage buildings. One of the buildings proposed will contain the office for the self-storage facility, and will be the only building connected to the proposed septic system and well, as it will have a bathroom. The office will consist of 600 SF and the bathroom is for the employees only.

Green Site Design LLC

Ellen Bartlett, P.E. • CPSWQ, Leed Accredited

July 30, 2020

Marcia Vlaun, AICP
Town Planner
310 Norwich-New London Turnpike
Uncasville, CT 06382

Re: Wetland Delineation
Leffingwell Rd.
Driveway Guys
GSD-55

Dear Ms. Vlaun:

Green Site Design (GSD) has investigated the referenced site to determine the conditions present and to delineate and evaluate wetlands. The investigations were conducted in June of 2020. This report documents the wetland boundary, soils, habitat types and plant species found at the site. Note that the wetland delineation was done per the State of Connecticut criteria as defined in C.G.S. 22a. The soils were investigated with a hand held Dutch auger and wetlands delineated with pink flagging tape.

Existing Conditions

The site is located north of Leffingwell Rd. and west of Montville Rd. in Montville, CT. The site is currently undeveloped and being used for parking by Driveway Guys. Wetland was delineated at the north side of the site. The areas of on-site wetland are portions of the contiguous wetland associated with Trading Cove Brook, which continues off site. The site has been subject to extensive excavation, grading and clearing in the past and has areas of gravel parking, open field, stands of invasive vegetation and hardwoods along Leffingwell Rd. The majority of the site – both wetland and upland – has invasive species such as Japanese knotweed, common reed, and multiflora rose. In addition, there is buried concrete, asphalt and the remains of sedimentation ponds from the sites previous use as a gravel pit.

Site Topography

The site has extensive areas of previously disturbed soils and irregular topography (debris piles), especially along the northern boundary. The topography of the remainder of the site varies from steep along Leffingwell Rd. to nearly level with short, abrupt slopes down to the wetlands. The irregular presence of fill discovered in several test pits reveals the past excavation and filling. The surface water flow on the site is generally from south to north and into Trading Cove Brook.

317 Main Street • Norwich, CT 06360 • 860.892.1380 • ebartlett@greensitedesignllc.com

Surrounding Land Use

The site is surrounded by Montville Rd., Leffingwell Rd., an electric right of way and Trading Cove Brook. Nearby land use is both residential and commercial.

Surficial Geology and Soils

Table 1 is a summary table of the soils found on the site. Note that the original soils on site were formed in glaciofluvial deposits (deposited by glacial meltwater flow). However, as shown on the NRCS mapping attached in Appendix A, except for a small sliver of soil along Leffingwell Rd., the entire site shows signs of alteration and is mapped as Udorthents.

Table 1 - Soil Types and Properties at the Leffingwell Rd. Site

Soil Series	Parent Material	Drainage Class	Texture/Characteristics
Agawam (29)	glaciofluvial	Well drained	Sandy loam over sand and gravel
Udorthents (306)*	Varies – fill material	Moderately well to poorly on site	Typically sandy loam

* Wetland soil type

Wetland Description

The on site wetland is part of a larger riparian system that extends to the east and west. Trading Cove Brook flows eastward out of this wetland and under Montville Rd. eventually flowing into the Thames River. The onsite wetland edge is well defined by a two to three foot topographic break. This riverine swamp has some areas of long-term saturation and is primarily a red maple swamp with smaller numbers of cottonwood and sycamore.

Typical plant species within the wetland include red maple (*Acer rubrum*) in the canopy, sweet pepperbush (*Clethra alnifolia*) and high bush blue berry (*Vaccinium corymbosum*) in the shrub layer, and skunk cabbage (*Symplocarpus foetidoeus*) , cinnamon fern (*Osmunda cinnomomea*) in the herbaceous layer. These plants are characteristic of local red maple swamps.

The hydrology of the subject wetland is supported primarily by groundwater discharge with surface water inputs during large storm events.

Based on evidence found during the delineation, the principal functions of the wetland is wildlife habitat, floodwater storage, groundwater recharge/discharge.

Potential for Impacts

The plans prepared by GSD show that no work will be performed in the 50 foot Upland Review Zone around the regulated wetlands. The site has also been designed per the CTDEEP 2002 (Erosion and Sedimentation) and 2004 (Stormwater) Manuals. The soils on site have low potential for erosion and if the E&S measures are installed and maintained during construction, wetland impacts can be avoided. The stormwater treatment system has been designed with additional capacity beyond what is required by the 2004 Manual. In summary, GSD believes that if proper measures are taken per the plans, no adverse impacts to wetlands will result.

Please contact me if you have any questions.

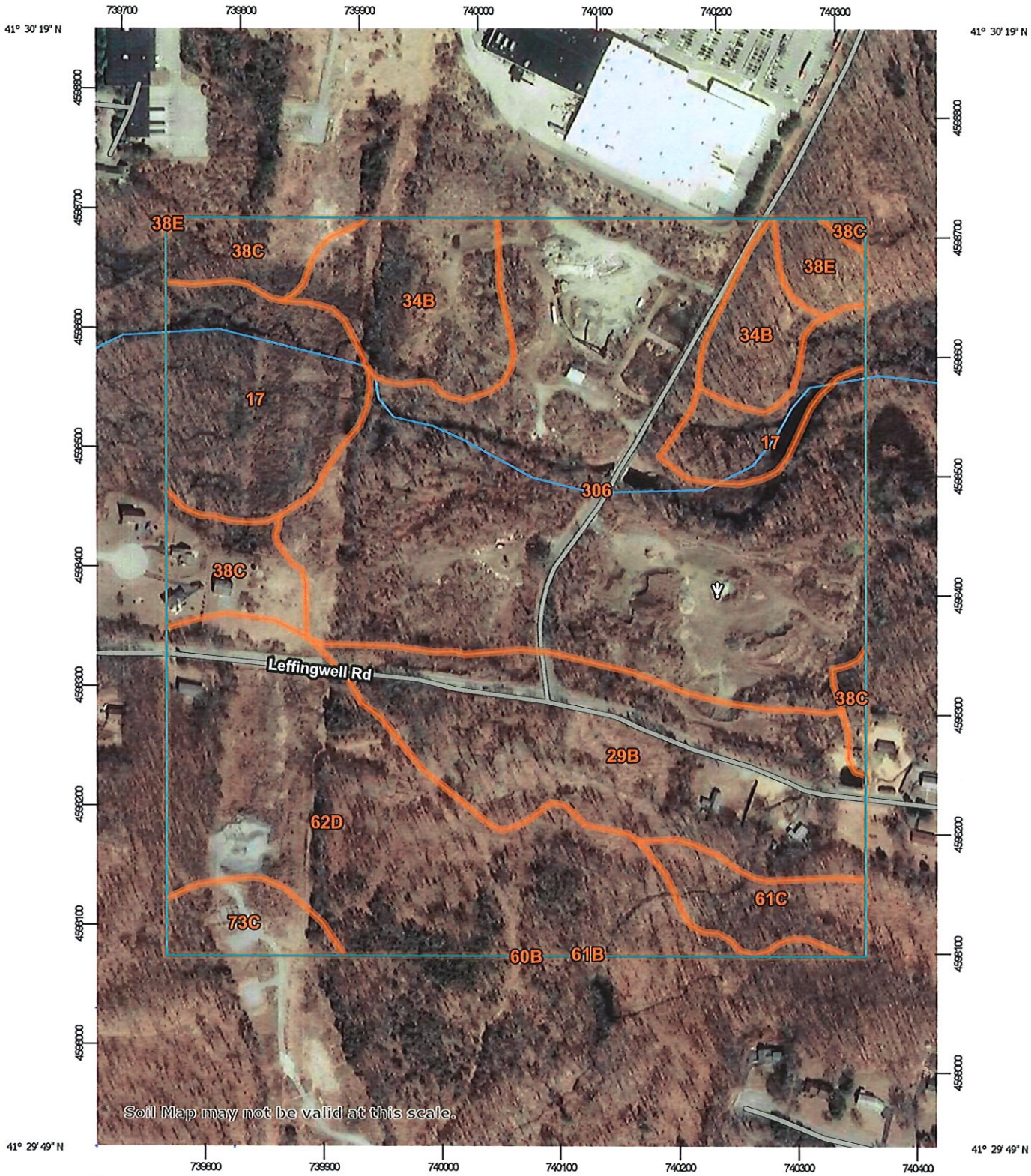
Sincerely,

Robert C. Russo

Robert C. Russo
C.S.S.

Appendix A
Soils Data

Soil Map—State of Connecticut
(Leffingwell Rd Soils)



Map Scale: 1:4,560 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 20, Jun 9, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 20, 2019—Mar 27, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
17	Timakwa and Natchaug soils, 0 to 2 percent slopes	9.4	10.4%
29B	Agawam fine sandy loam, 3 to 8 percent slopes	13.4	14.8%
34B	Merrimac fine sandy loam, 3 to 8 percent slopes	7.2	8.0%
38C	Hinckley loamy sand, 3 to 15 percent slopes	4.8	5.4%
38E	Hinckley loamy sand, 15 to 45 percent slopes	1.2	1.3%
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	0.0	0.0%
61B	Canton and Charlton fine sandy loams, 0 to 8 percent slopes, very stony	0.0	0.0%
61C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes, very stony	2.6	2.8%
62D	Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony	17.9	19.8%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	1.9	2.1%
306	Udorthents-Urban land complex	31.9	35.4%
Totals for Area of Interest		**90.2**	**100.0%**

DRAINAGE CALCULATIONS, HYDRAULICS & HYDROLOGY REPORT

SELF STORAGE
161 LEFFINGWELL ROAD

JULY 2020
Revised 8/13/20

Green Site Design LLC

DRAINAGE HYDRAULICS AND HYDROLOGY REPORT

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CT GUIDELINES FOR SOIL EROSION & SEDIMENT CONTROL DURING CONSTRUCTION:

In accordance with the CT Guidelines for Soil Erosion & Sediment Control (Guidelines), the Sedimentation Basin will function as a Temporary Sediment Trap during the construction phase, and once construction is completed it will act as a permanent water quality basin for the life of the facility. 5.9 acres of surface area will drain to the basin.

The Temporary Sediment Traps has been designed in accordance with CT Guidelines for Soil Erosion & Sediment Control (Guidelines) and has been designed to exceed the required volumes:

Area = 5.9 Acres

Sediment Storage Volume (SSV) = (5.9 acres)(134 CY/AC) = 790.6 CY = 21,346 CF

Total Required:

SSV = 21,346 CF (Required)

Wet Storage Volume = SSV/2 = 10,673 CF (Required)

Dry Storage Volume = 10,673 CF (Required)

Total Provided:

SSV = 29,000 CF

Wet Storage Volume = 15,800 CF (Provided below bottom of riprap level spreader)

Dry Storage Volume = 13,200 CF (Provided above bottom of riprap level spreader)

CONNECTICUT STORMWATER QUALITY MANUAL

WATER QUALITY BASIN:

The Water Quality Basin has been designed to function as a sedimentation trap during stabilization, and then as a Water Quality Basin and permanent water quality treatment for the life of the facility.

The Connecticut 2004 Stormwater Quality Manual (Manual) applies to the post construction phase, for the operation of the facility. The temporary sediment trap has been designed to function as a Water Quality Basin after the site is stabilized. It meets all the criteria of the Connecticut Stormwater Quality Manual for a Water Quality Basin. The attached plan entitled Solar Module Effective Impervious Exhibit shows how the impervious area was calculated.

The calculations show that a Water Quality Volume (WQV) of 15,855 CF is required. The Water Quality Basin will provide 29,000 CF of WQV.

WQV = (1")(R)(A)/12
A = 5.9 Acres
R = 0.05 + 0.009(I)
I = 4.5 Acres / 5.9 Acres = 0.76 (76%)
R = 0.74
WQV = 0.364 Ac-Ft = 15,855 CF (Required)
WQV = 29,000 CF (Provided)

FLOOD PLAIN

The drainage system for the site has been designed to provide for no increase in peak stormwater flows to Trading Cove Brook during the smaller storm events. The water quality basin will provide for a decrease in peak flows to Brook during the smaller storm

events, 25 year and under. During a 100 year storm event the basin will not detain water, as it is located within the floodplain. As the project is located in the lower third of the watershed for the brook, detaining water during the 100 year storm event is not advisable.

The grading within the floodplain has been designed to provide compensatory storage with the floodplain. The volume calculations for the proposed grading within the floodplain show that we are providing a net gain of 702 CY of flood storage, within the floodplain.